Lake Michigan Biodiversity Conservation Strategy: Providing on-line access to results and supporting information

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State of Lake Michigan Conference
September 27, 2011

Sleeping Bear Dunes, North Bar Lake. Lake Michigan
Credit: K. McConnelly

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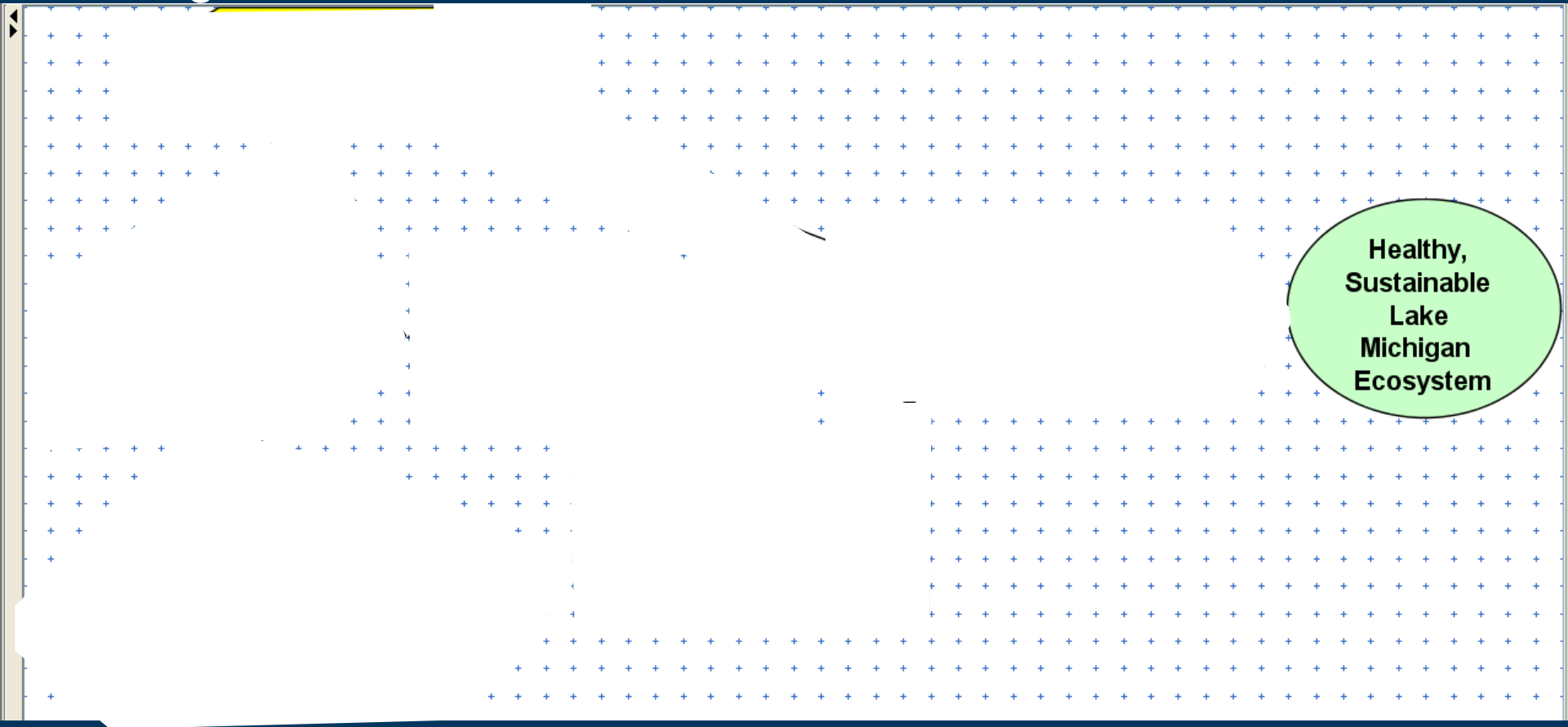
Context

Strategies | Factors | Threats | Goal



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Summary of Session

Overview

- Context
- Intended Outcomes

Developing Biodiversity Conservation Strategies for Lake Michigan and Lake Erie: summary

Developing the Great Lakes Information Management and Delivery System--summary

Break-out Sessions

- Three topics
- Two sessions of roughly 25 minutes each

Developing Biodiversity Conservation Strategies for Great Lakes Erie and Michigan

"…working with a **broad network**…developing strategies for the **restoration and conservation** of the **native biodiversity** and **ecosystem function**… "

"primary output… **biodiversity conservation strategies** that will **complement** and **be incorporated into** the **Lakewide Area Management Plans (LaMPS)**

With funding from:

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Completed Biodiversity Conservation Strategies

THE SWEETWATER SEA

AN INTERNATIONAL BIODIVERSITY CONSERVATION STRATEGY FOR LAKE HURON

TECHNICAL REPORT

The Nature Conservancy
Environment Canada
Ontario Ministry of Natural Resources
Michigan Department of Natural Resources and Environment
Michigan Natural Features Inventory
Michigan Sea Grant
The Nature Conservancy of Canada

Prepared by the Lake Huron Biodiversity Conservation Strategy Core Team
in cooperation with the Lake Huron Binational Partnership

June 2010

The Beautiful Lake

A Bi-national Biodiversity Conservation Strategy for

Lake Ontario

Prepared by the Lake Ontario Bi-national Biodiversity Conservation Strategy Working Group
In cooperation with the U.S. – Canada Lake Ontario Lakewide Management Plan

April 2009

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Conservation Action Planning (CAP)

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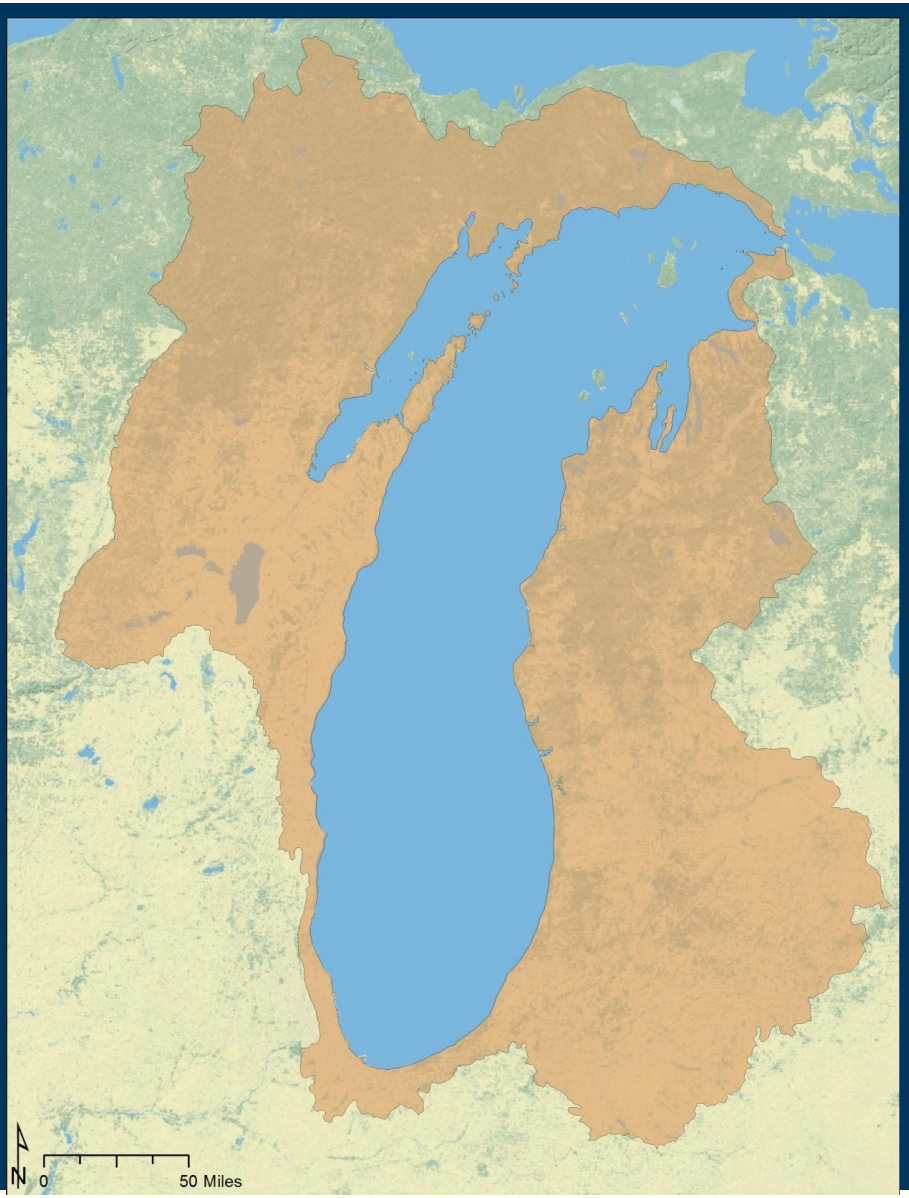
Project Scope: Lake Michigan



Aquatic Biodiversity Targets

- Open Water Benthic and Pelagic Ecosystem
- Nearshore Zone
- Native Migratory Fish
- Coastal Wetlands

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Terrestrial Biodiversity Targets

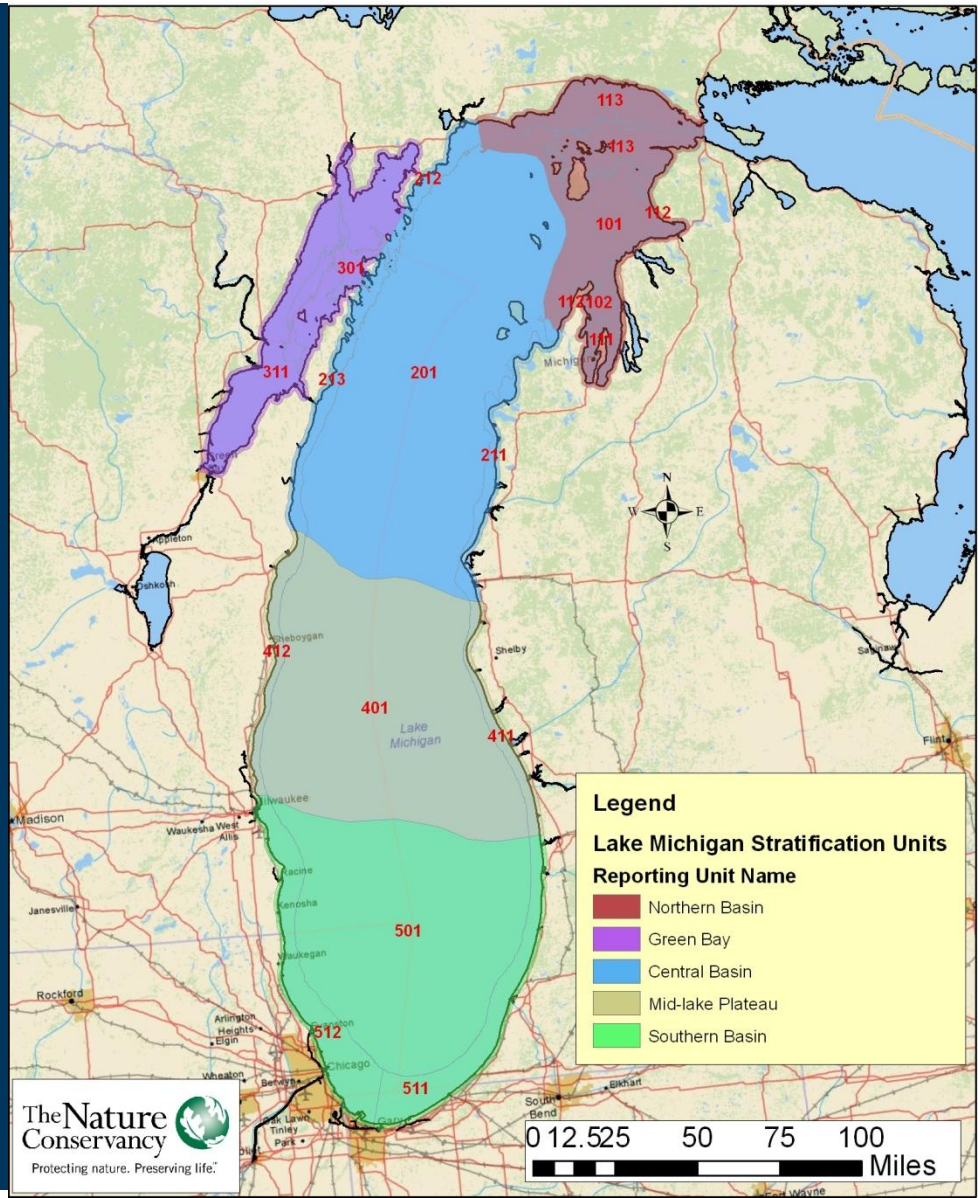
- Islands
- Coastal Terrestrial Systems
- Aerial Migrants
- (Colonial Nesting Waterbirds)

Lake Michigan Stratification Units

Reasons to Stratify:

- Reduce complexity
- Regional familiarity

5 Reporting Units
17 Assessment Units



Vision Statement

Vision:

We envision a healthy Lake (Michigan/Erie) that sustains the full array of natural ecosystems and the services they provide. A resilient Lake (Michigan/Erie) is sustained by collaborative, ecosystem-based management, now and into the future.

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Project Timeline

Project Structure
Oct '10 – Mar '11
- Core Team
- Steering Committee
- Agreements

Biodiversity Assessment
Jan – October '11
- Compiling Information
- Project Scope
- Viability Assessment
- Threat Assessment

Conservation Plan
Oct '11 – Apr '12
- Conservation Strategies
- Implementation Recommendations

Final Products
Jun '11 – Sep '12
- Final Report
- ~~Summary Report~~
- Data/Information/ Map products

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Great Information, Great Decisions:

Developing a Great Lakes information management and delivery system

Mary Khoury

Aquatic Ecologist/
Conservation Planner

State of Lake Michiga
Michigan City, IN
September 27, 2011

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Overview

- Why an information management and delivery system (IMDS)?
- What is the IMDS that we are designing?
- What is our progress to date?
- Why are we talking about it to you today?

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Imagine

You are a coastal zone manager responsible for many conservation values – what if you could . . .

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The Problem

We lack an information supply chain that supports core decisions needed to achieve strategic conservation results at a landscape-scale.

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TNC's Great Lakes Project

Objective: To ensure the Great Lakes watershed is among the most effectively managed ecosystems on Earth.

Goals:

1) Build a Network of Conservation Lands & Waters
2) Restore the Health of Working Lands and Waters
3) Create, Share and Leverage Science and Knowledge

Project Teams:

- Watershed Health
- Food Web Restoration
- Climate Change Adaptation
- Coastal & Nearshore Health
- Northern Forests
- Aquatic Invasive Species

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Role of USFWS Landscape Conservation Cooperatives

Science and Technology

- Data Development
  - Downscaled climate data
  - Complete NWI Data
- Knowledge Development
  - ID Climate vulnerable species
  - Climate adaptation recommendations
- Information Delivery
  - Great Lakes IMDS

Information Development and Delivery

Social

Decision Making

- Shared vision
- Communication
- Coordination
- Collaboration

Logistical

- Protection
- Land and Water Management
- Policy

Conservation Delivery

LCC Role

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What is an IMDS?

It is NOT…

- A collection of GIS maps or data
- A single decision support tool (e.g., fish passage)
- Designed to answer one specific question, or decision

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What is an IMDS?

An information supply chain supporting core decisions of strategic habitat conservation

1. What are realistic desired conditions?
2. What are current conditions; is there a problem?
3. Can we, and how can we, strategically achieve our desired conditions?
4. Are our actions leading to desired improvements?

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Great Lakes Information Management and Delivery System

Knowledge Network

Visualization

Data Catalog

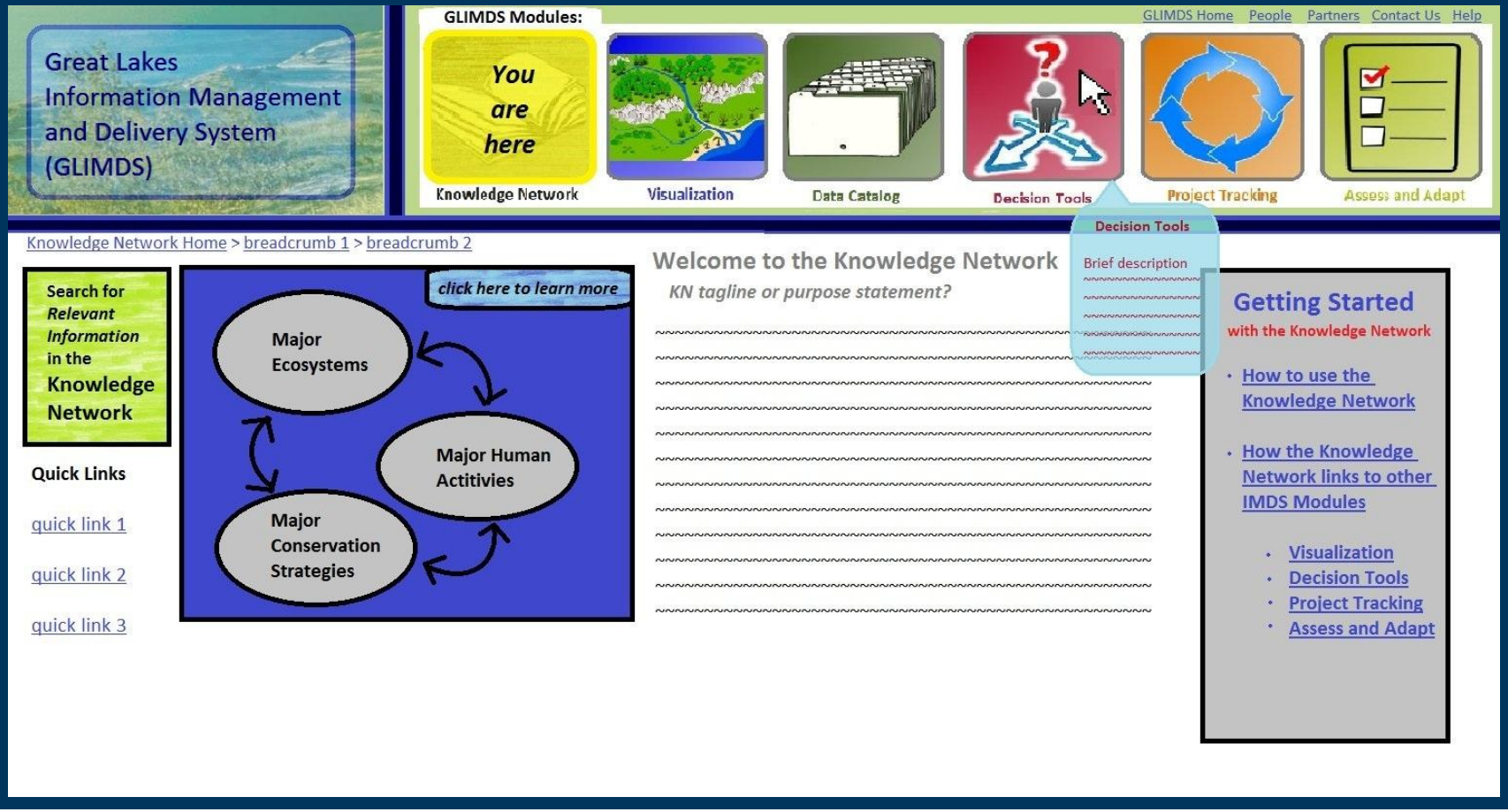
Decision Tools

Project Tracking

Assess and Adapt

Knowledge Network

Purpose: *Provide users with conservation knowledge needed to effectively interpret the data available in the other IMDS modules and promote informed conservation decisions and communication.*



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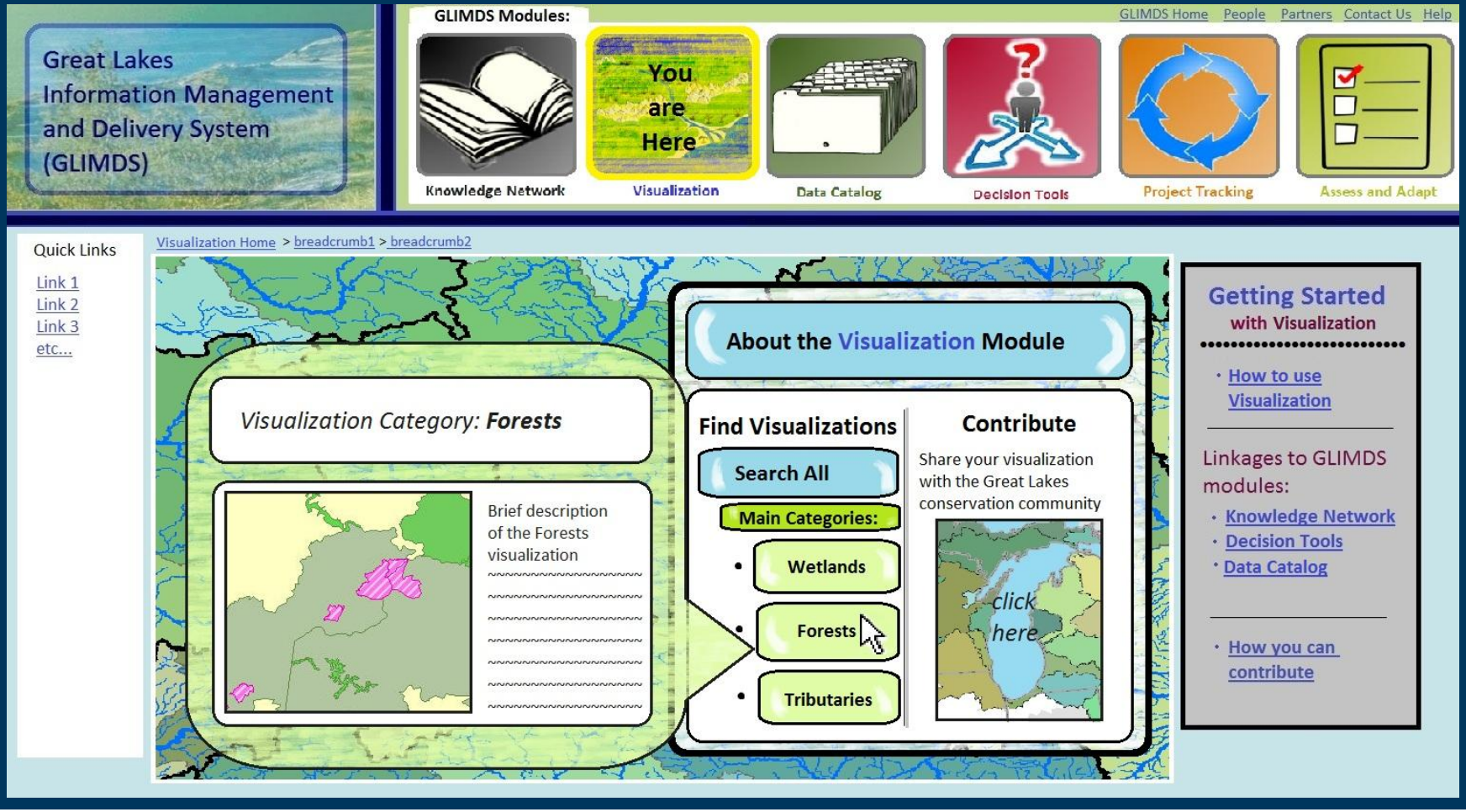
Data Visualization

Purpose: *Allow users to query and find existing visualizations relevant to the conservation of the Great Lakes ecosystem.*



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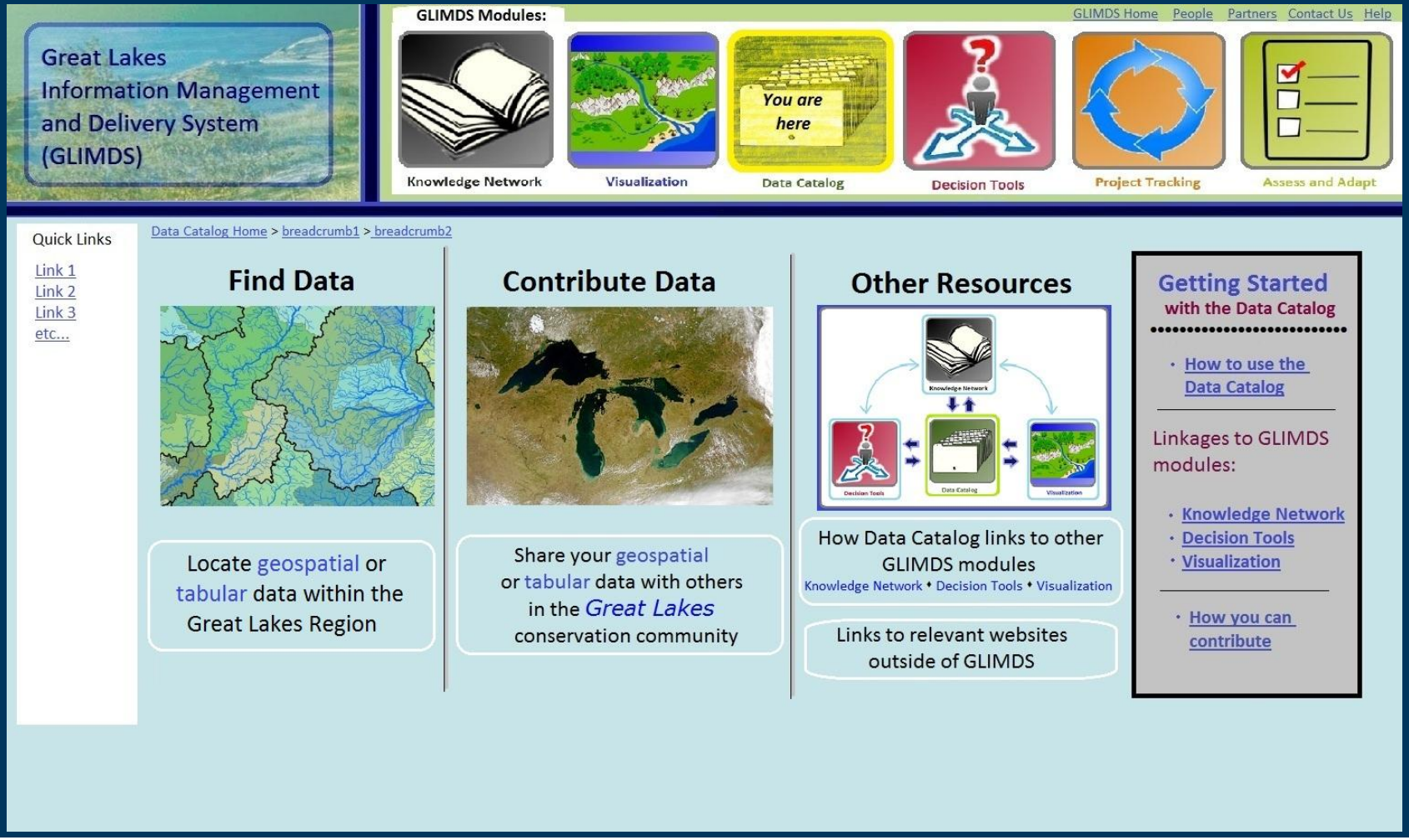
Data Catalog

Purpose: *Allow users to efficiently locate and obtain data relevant to the conservation of the Great Lakes ecosystem.*



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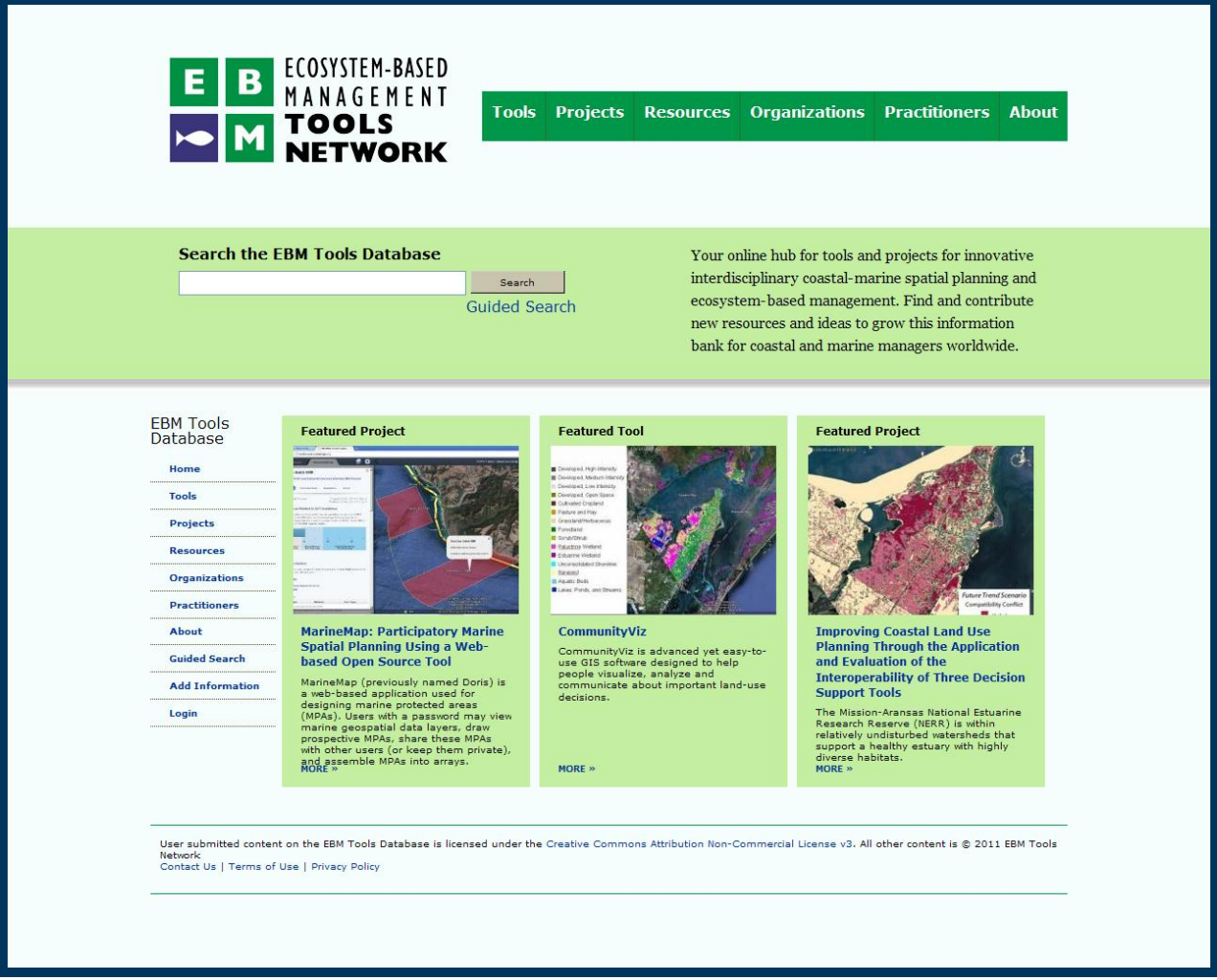
Decision Tools

Purpose: *Allow users to efficiently identify, locate, and compare models and decision tools, which support assessment, forecasting, and planning for Great Lakes ecosystem conservation.*



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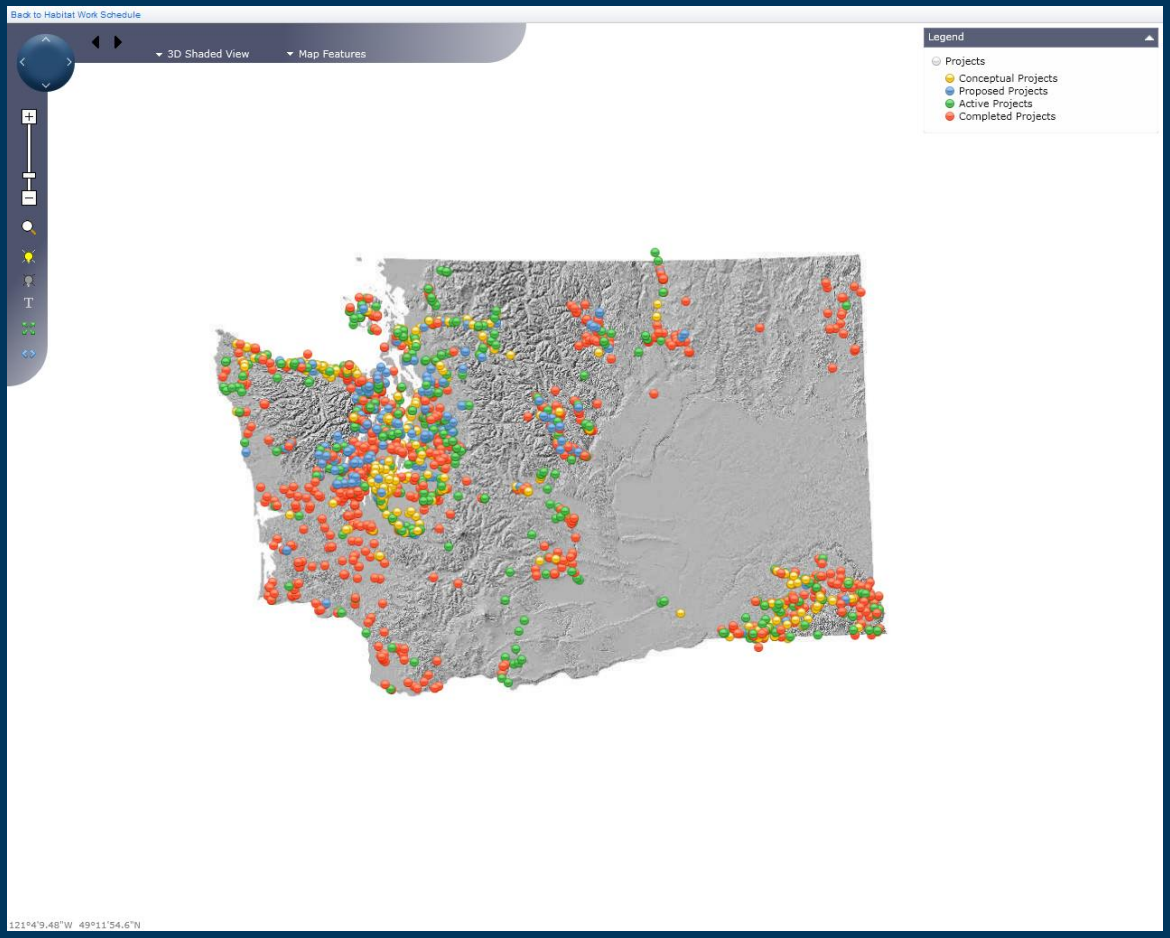
Project Tracking

Purpose: *Allow users to efficiently track and coordinate the implementation of conservation actions by providing mapped locations and the ability to query and* ***summarize*** *relevant project information within and across projects.*



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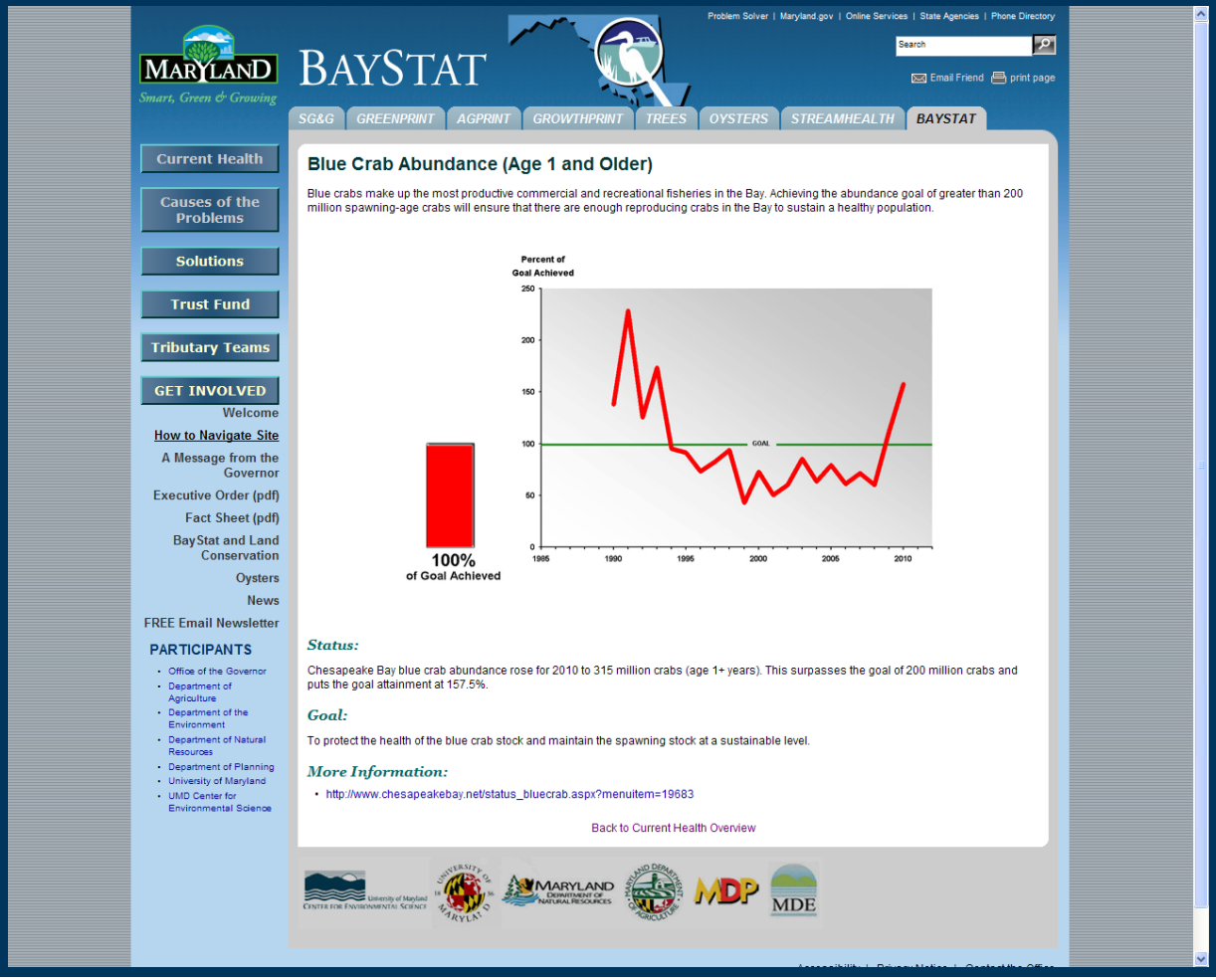
Assess and Adapt

Purpose: *Allow users to locate and obtain relevant sets of status and trend indicators across related ecological attributes, human activities and conservation strategies/actions.*



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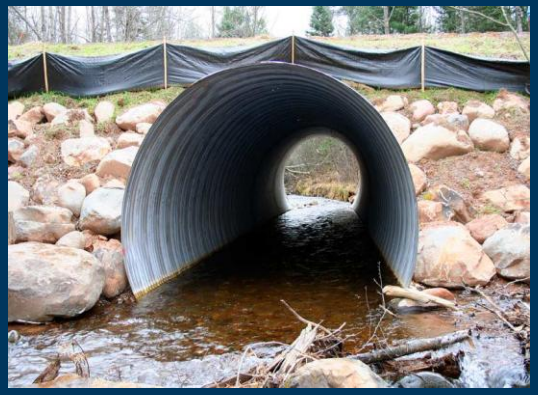
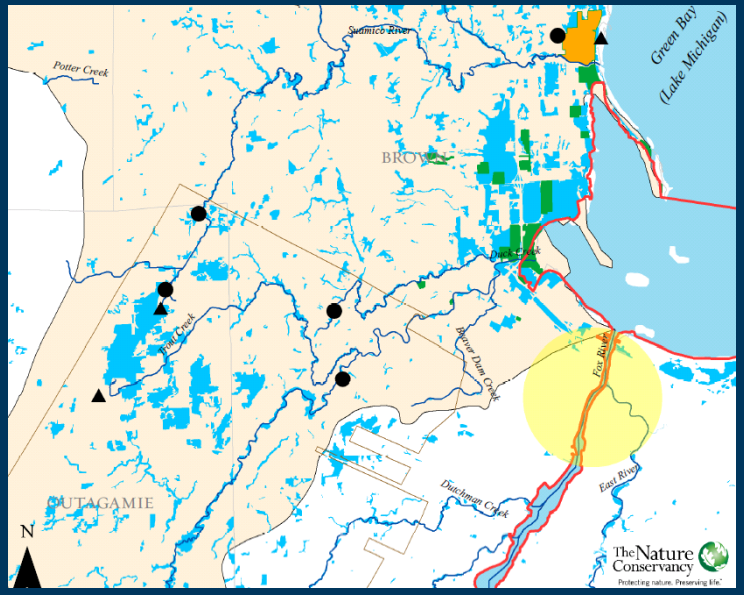
Green Bay Focal Strategies

- Stream Connectivity





Duck-Pensaukee Watershed

- Wetland mitigation

Progress to date

Phase I (2011): Design pilot scope and structure

- Define scope - *complete*
- Create system architecture - *underway*
- Develop Content – *underway*

Phase II (2012): Populate

Phase III (2013): Populate, Evaluate, and Create Plan for Long-term

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Questions?

http://conserveonline.org/workspaces/great-lakes-project